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ABSTRACT

The literature on training evaluation and evidence from a number of employers who are actually undertaking some training evaluation activities were reviewed and synthesized into a cyclical model for evaluating training. First, the following direct benefits of evaluating training were identified: quality control; efficient training design; enhanced professional esteem; enhanced negotiating power; and identification of appropriate assessment criteria and intervention strategies. Next, a model of the training process was developed that consists of the following stages: identifying training need by determining the skills/attributes required of and actually possessed by job holders; designing, preparing, and delivering training; discovering trainees' attitudes toward training and extent of learning; discovering whether the lessons learned during training have been transferred to the job and are being used effectively on the job; evaluating the effects of training on the organization; and reinforcing positive behavior to ensure that the advantages of training are maintained in the long term. The impossibility of evaluating every training event was acknowledged, and guidelines were provided for prioritizing evaluation activities with consideration for the importance, difficulty, and frequency of tasks for which training is being provided and weighing those factors against the costs of training. (Contains 39 references.) (MN)

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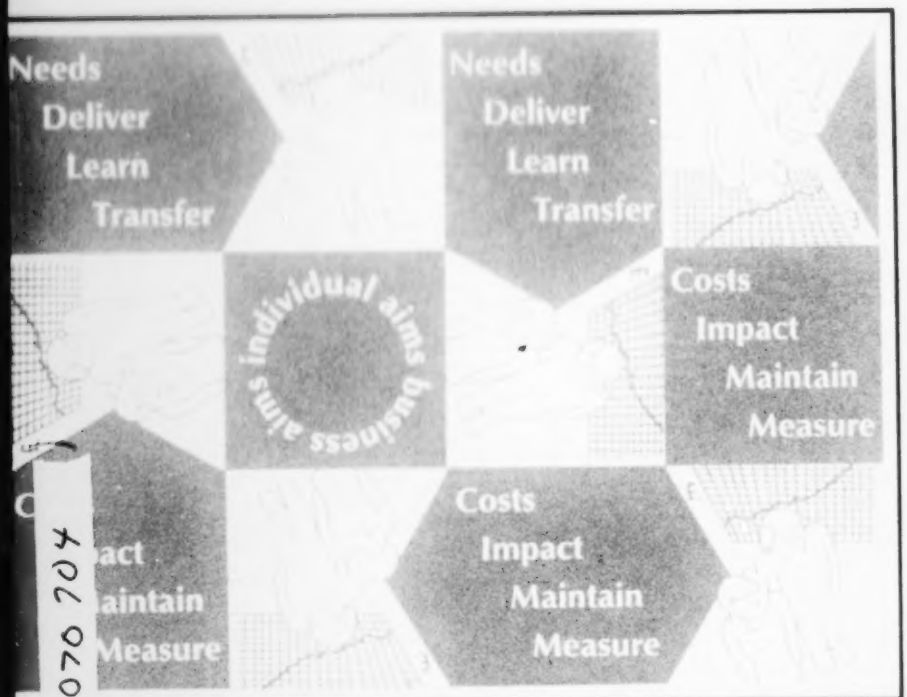
# MEASURING THE EFFECTIVENESS OF TRAINING

M Spilsbury

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# 1. Introduction

## 1.1 Background

Throughout the 1980s, the competence of the UK workforce became an increasingly important concern. Comparisons of the quality of our workforce with that of our international competitors established that, broadly speaking, our workforce were less productive than our competitors and that this undermined our ability to compete. Nevertheless, the common perception that UK employers 'do not train' is a misconception. The latest figures available show that in 1990 a total of £33 billion was spent on training in Britain[1]. The debate has shifted away from being solely whether or not we train enough as a country, to also cover whether the money is being spent wisely. Increasingly, the concern is that employers get the best returns on their investments.

Despite this, there is still apparently little systematic attempt to ensure that spending on training is money well spent. Various surveys have found that evaluation of training is, in the majority of firms, fairly rudimentary and that where it does exist, it tends to focus on costs of training rather than actual benefits. A recent survey (*Training Trends*, Industrial Society, 1993) shows that a only quarter of respondents are satisfied with the methods being used to evaluate training and development, with nearly half reporting some levels of dissatisfaction. This results in a rather vague perception of the value of training programmes and a reliance on 'acts of faith' rather than a clear analysis. This can lead ultimately to a reluctance to devote resources in this direction. As the Training Trends (*op cit.*) survey notes:

> *'Most organisations either fail altogether to evaluate the effectiveness of the training they pay for, or believe that the checks that they do carry out are, at least, badly flawed. . . . Nor is the situation even improving.'*

Ironically, there is an extensive literature on training evaluation, ranging from practical and prescriptive texts to complex theoretical models. What is clear, however, is that there is more being written (and said) about measuring training effectiveness than is actually taking place in the workplace. In these

[1] See *Training in Britain*, 1990.

circumstances, training and development does become such an act of faith, tolerated when money is available and when there is an immediate perceived need. For training to become integral to the workplace, evaluation has to move beyond this and demonstrate that investment in training is linked to business success, able to contribute to business objectives and capable of making a return for the organisation.

There are signs that there is a changing mood in the UK with regard to measuring the effectiveness of training. Investors in People has as one its four criteria that an employer must 'evaluate the company's investment in training and development to assess achievement and to improve future effectiveness'. At the time of writing, over 900 employers in the UK had achieved the Investors standard and about 9,000 had made a public commitment that they would work towards doing so. A recent Industrial Society publication (*Managing Best Practice*, 1994) notes that there is now an almost complete consensus on the importance of training evaluation, that commitment to training evaluation has risen markedly in the last two years and is set to rise sharply over the next two. They suggest that there are three key factors behind this move: (i) business efficiency considerations, as economic pressures make it increasingly vital for employers to tighten up on how the cash is being spent, (ii) the impact of Investors in People and (iii) internal pressures from the organisation's own senior managers and trainers.

## 1.2 Report structure

The report is based on a synthesis of the literature on training evaluation, combined with evidence from employers who are undertaking some evaluation of their training.

The report is structured in the following way:

- Chapter 2 contains a brief discussion on the rationale for undertaking an evaluation of training.
- Chapter 3 outlines the overall concept of the training system which has been developed in the theory over the last two decades and outlines the model that will be developed throughout the remainder of the text.
- Chapters 4 to 9 expand upon each of the stages described in this model to give a clear description of actions that are required in each of these steps.
- Chapter 10 examines how the costs and benefits of the evaluation should be calculated and how they should be presented within the organisation.
- Chapter 11 presents our conclusions and summary.

# 2. Rationale and Process of Measuring the Effectiveness of Training

To measure the effectiveness of training can be a difficult and costly thing to do. Before attempting to set up structures to allow such a measurement to take place, it is as well to be sure that such an activity is worthwhile. The question of 'why bother' can be addressed at two levels: why bother at all and why bother in particular circumstances? (*ie* how to prioritise the evaluation activities.)

## 2.1 Why bother to evaluate?

Newby (1992) gives the most straightforward answer to this question: that constructive, practical evaluation of training is available to anyone with a serious interest in training and that the benefits of doing so substantially outweigh the costs. Newby identifies six direct benefits:

- **Quality control**: quality control systems are designed to ensure that products or services are fit for their intended purpose. Evaluation in training will assess the extent to which work-related results can be demonstrated to arise from the training. Successful, positive elements of training can be maintained and reinforced, whilst negative elements removed or revised. If results cannot be justified, then it becomes hard to justify the commitment of any resources to the training activity and they can be re-allocated to where they may make a greater impact.
- **Efficient training design**: it throws an emphasis on those elements of a training system which matter, such as a proper definition of objectives and setting criteria on how these objectives are to be measured.
- **Enhanced professional esteem**: training professionals can gain enhanced stature from having systematic evaluation data rather than intuitive assessments of their contribution to the business. Being assessed on their contribution to the 'bottom-line' of the business puts the HR function on the same footing as other functions, instead of claiming that the nature of their work does not allow an application of the same criteria. This may help to break down the barriers facing the integration of HR professionals within organisations.

- **Enhanced negotiating power:** on much the same tack, evaluation makes it possible for the HR function to demonstrate a successful contribution to the business over a period of time. When resources are to be allocated and new investment decisions to be made, then being able to show the outcomes of training could be invaluable.
- **Appropriate criteria of assessment**: individuals within an organisation will make judgements about how effective the training function is, regardless of whether an evaluation system is in place or not. Given this, it is very important that the HR controls the choice of appropriate criteria, which it can most safely do on the back of a formal evaluation process.
- **Intervention strategy**: evaluation can be a tool for changing the way that training is integrated into the organisation. It offers a means by which the HR function can build on its enhanced esteem and negotiating power to play a more active role in developing policy.

## 2.2 Prioritising evaluation activities

The second of these issues is perhaps not whether to evaluate or not at all, but which training activities to evaluate. Evaluation can be a time consuming process, and time spent on evaluation is time that cannot be spent elsewhere. Trying to measure the effectiveness of *every* training event is probably impossible: even if they could all be identified, then it would be impossible to encompass all of them within an evaluation framework, even given an unlimited budget. In trying to set up systems for measuring effectiveness of training, a decision on priorities will be necessary. Again, Newby (1992) offers some guidelines:

- **Importance**: what could go wrong if the training is not successful? In some senses, it could be life threatening (*eg* the loss of life for inadequate safety training), in others it could have a serious impact on the business capacity, particularly where the activity is vital in achieving business objectives.
- **Frequency**: how regular is the training activity? If it is a one-off, not to be repeated, then evaluation will not generate any information to allow future modification (although it may allow lessons for similar training). If, however, the training is a regular event (*eg* an induction programme) then evaluation becomes more worthwhile as information can flow back to improve its design.
- **Cost**: how costly is both the training event and the evaluation? If the training is a major item in the training features, and accounts for a significant amount of the training budget, then it should be evaluated. If nothing else, such significant items are normally obvious targets for 'trimming' when times are hard and it is as well to have a proper defence prepared. In terms of the cost of the evaluation, the more information required usually means more expense in terms of

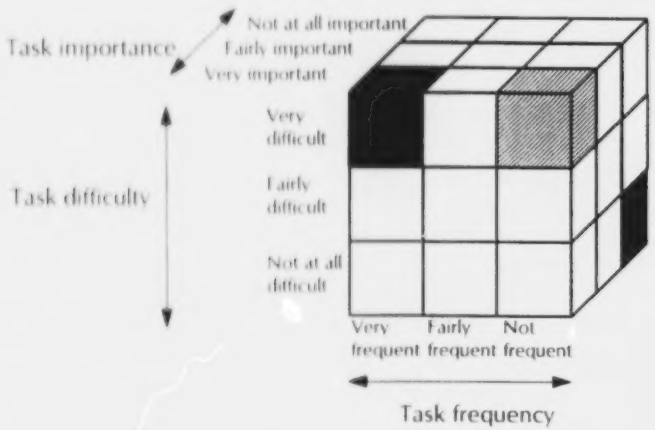
gathering and interpreting it. However, despite the expense, the evaluator should always endeavour to get the most appropriate information for the evaluation.

Another combination of factors which may add a dimension to this consideration, relates not specifically to the training event but to the sphere of performance that the training is designed to improve. These factors relate also to the prioritisation of training delivery (and we refer further to this in Chapter 4). The factors that need to be considered are:

- **task importance**: how important is the task to the organisation?
- **task difficulty**: is the task simple and easy to master, or is it complex requiring the development of sophisticated skills?
- **task frequency**: how often does the task take place?

It is perhaps best to consider these at the same time. Below is a diagram of this three-dimensional problem.

**Diagram 2:1 Three dimensions of training**




The shaded square in the top left of the matrix shows an activity that would appear to be a priority for both training and evaluation, as it relates to a task that is difficult, performed frequently and is very important. At the opposite part of the matrix, tasks that are not difficult, not performed regularly or important should not be a priority for either training or evaluation. Tasks which fall between these two ranges will require a more qualitative assessment: the grey square shows a task that is not performed frequently, but is both important and difficult (for example, a business strategy review), which would results in long-lasting consequences.

Newby (*op cit.*) suggests that evaluators should ask themselves what effect the evaluation will have on the organisation. If the answer is none, then it must be questioned whether it is worthwhile doing the evaluation; it may be more worthwhile exploring why the evaluation will have no impact. Two scenarios are possible:

- **Where the evaluation shows that no change is necessary**. This does not mean that it has not been worthwhile: it may not have led to any change of behaviour, but confirm a widely held (but unvalidated) view that a training programme making an effective contribution is worthwhile, even if it draws the 'we told you so' type of reaction.
- **Where the evaluation shows that a change is necessary, but that the results are ignored.** The reasons for this will be bound up with organisational factors so complex that they cannot be covered in a text such as this, but suffice to say an evaluator always needs to be sensitive to the politics of the organisation in which they are working.

### Where evaluation might not be appropriate

As evaluation is an expensive and time-consuming process, it is worth considering whether a *realistic* evaluation can be achieved. The two things to consider are whether:

- **the timing is appropriate**, where although a decision to abandon an evaluation would be rare, activities may be postponed because the timing is not appropriate. Reasons for inappropriate timing may include:
  - The training may have taken place too recently or too distantly to allow a realistic evaluation. In practice, a too recently completed training event should not stop all evaluation activities, allowing interim measures whilst longer term effects are allowed to develop. If the training was too distant and nothing has been done, then it may be too late for remedial action and it may be more profitable to focus on up-coming training events rather than older ones. Ideally, evaluation should be planned to take place when it is expected to contribute.
  - Other events preclude evaluation activities, such as any other major change in working practices. In these cases, the most appropriate question to ask is probably whether the training should have gone ahead in any case.
- **the cost is unreasonable**, particularly as a proportion of the overall spend on the training event. If the cost is unreasonable, then an alternative evaluation methodology should be considered. Estimates of what are reasonable costs vary but, as a guide, it is perhaps worth noting that Government Departments consider that about one per cent of a training programme's total training budget should be spent

on evaluation. Of course, the proportion of money spent on evaluation activities will vary through the life of a particular training event, with disproportionate amounts being spent at critical periods (*eg* training development) and less whilst the training programme is up and running.

## 2.3 Who does the evaluation?

A feature of the late 1980s and early 1990s has been the increasing involvement of line managers in the delivery of HR. These changes have largely mirrored the trend of pushing down accountability for running business units or delivering services to the lowest possible level of the organisation. Bevan and Hayday (1994) examined this changing responsibility and how they are supported in the role. The evidence found that the structure of the organisation often affected the rationale for such a development: those which are large, diversified or geographically spread are more likely to have decentralised personnel functions. In all the case studies of this study, evidence was found of tensions between the HR function and line managers, which limited the real extent of developed accountability achieved. However, it is argued that by passing the more routine functions down to line managers, the HR function could concentrate on developing its role as a centre of excellence, allowing staff to act in a consultancy role, considering strategy and leaving them available to advise on the more complex problems of personal management.

This development has obvious implications for measuring the effectiveness of training and a number of issues need to be addressed:

- Should measuring the effectiveness of training be a subject that is devolved to line managers? The answers probably lie somewhere between the two: it is an issue of obvious strategic importance and yet most of the inputs have to derive from employees themselves and their line managers.
- Given that evaluation of training was notoriously weak before devolution, it can be argued that it is singularly inappropriate that HR personnel now see fit to advise line managers on how to approach this.
- What level of support can HR managers offer to line managers? Appropriate materials need to be developed which can make these tasks simple and routine, and yet are sophisticated enough to address the complex issues we have identified in the earlier chapters.

There is perhaps also a reverse issue: if the HR function expects the line managers to adopt some of the HR roles and become more like personal managers of old, is it not unreasonable to expect that HR managers should become more like business managers. Elliot (1989) argues that there does not appear to be

an adequate language to describe the link between business strategy and training: whilst accountants have a language that will make their role understandable to the many managers who are not accountants, personnel managers do not share a common language or even the same concepts. Jackson (1989) concurs with this, arguing that trainers should consider themselves as 'business man or woman' and re-define their terms to those more widely understood elsewhere. Jackson notes that 'business results are typically measured in financial terms: this is the currency of the business man or woman. This is the currency of the trainer.'

The devolution of HR functions to the line manager is a relatively new phenomenon, but one that appears set to continue and place new responsibilities on individuals who previously did not hold these. *Training Trends* (1993) confirms this. It notes that in most organisations (79 per cent), responsibility for training evaluation lies with the individual's line manager, with about half of the respondents stating the training department also has a role to play. *Training Trends* notes that:

> *'These findings confirm the increasingly vital role that line managers now play in the training and development of staff. With growing pressure on organisations to get the maximum value from training, it is clearly important that the line manager's evaluation role is an active one.'*

A more sceptical note is provided by the Industrial Society (1994), which notes the comments of its specialist consultant in training evaluation:

> *'I was taken aback by the results of the Training Trends survey showing that three-quarters of evaluation is handled by line managers. I simply do not believe that. The cases of evaluation that I know are almost all carried out by the training department with some involvement by line managers, although usually not enough involvement.'*

Bramley (1991) notes that if training is fully integrated into the organisation, the role of the training manager becomes much more wide-ranging: essentially that of an internal consultant. However, this may create some problems: this shift would call for a new set of skills on behalf of the training manager. Not all may welcome this, and not all will have the skills.

## 2.4 Considering the outcomes at the outset

The question of why the evaluation is taking place may seem to be semantic. However, the question needs to be asked by the evaluator each time an evaluation takes place because it can lead to the structuring of the evaluation and to ensure that the exercise produces meaningful results. As noted by Easterby-Smith and Mackness (1992):

*'Most evaluations are a waste of time unless they start by clarifying the purposes they are intended to serve, and this usually means clarifying whose purposes are being served.'*

The fact that there are different groups, with different interests in the outcomes of the evaluation should be explicitly considered. Easterby-Smith and Mackness name some of the typical stakeholders (Table 1:1 below): perhaps most organisations would add budget holders and line managers to this list.

**Table 1:1 Stakeholders' requirements of the evaluation**

| Stakeholders | Interest | Dominant purpose |
|---|---|---|
| Sponsors | Meeting deadlines.<br><br>Comparison with other regions. | Proving that training is enabling effective implementation. |
| Designers | Verifying that material is having the desired impact. | Proving that materials work. Monitoring and controlling the use of material. |
| Trainers | Identifying and correcting weak areas in courses. | Improving the overall quality of training and their own performance. |
| Trainees | Ensuring that they have learnt what will be needed. | Learning what will be required to operate effectively. |

*Source: Easterby-Smith & Mackness, 1992*

## 2.5 Summary

Before any activity is undertaken, the evaluator needs to consider three (related) questions:

- why is the evaluation taking place?
- who will use the results of the evaluation?
- what will the results be used for?

The answers will vary from case to case, and there may even be more than one answer for each of the questions. However, if these questions can be answered, the evaluation will have a statement of purpose, which will allow the evaluator to progress.

# 3. The Training Cycle

## 3.1 Introduction

This chapter outlines an overall framework within which the measurement of effectiveness of training may sit. The literature calls this framework many things: a training framework or a systems approach are but two of the more common phrases.

Regardless of the title, the overriding message is that training should not be considered as a static event but as a process where information on the effectiveness of training is a natural and essential part of the overall training process. It is useful to think of this as a cyclical process by which such information is fed back into the design of the training programmes which follow. For this reason we have called it a training cycle.

Whilst this may appear to be essentially 'old hat' it remains striking how little it is applied in practice. The *Industrial Society* (1994) asked whether organisations followed any particular route: only a tenth used any systematic method (*eg* a cyclical approach *à la* Kirkpatrick), with a fifth saying that they used no systematic evaluation method, and with 56 per cent saying that they did not know. These responses, it should be remembered, came from the same organisations that reported in Chapter 1 above, that evaluation was of the greatest importance and with importance increasing all the time.

## 3.2 The training cycle

A training cycle consists of a series of steps which lead to a training event being undertaken: evaluation provides feedback which links back to the initial stages of training design. Indeed, it is the evaluation/feedback process which makes this a cyclical event: without it training would be a linear process leading from initiating training through to its implementation.

This kind of approach is not new and is not unique to the field of training and development. Similar systems approaches have been fashionable in control engineering and cybernetics since the 1950s. More recently has been applied to economic, industrial and sociological systems.

The Armed Services have been delivering training in this fashion since the early 1970s. Their view of the training cycle, which they term the Systems Approach to Training (SAT), is that of:

- A training philosophy which emphasises the inter-relationship between training and other systems, such as personnel management, supply and logistics, and finance – and the inter-dependence of the component parts of a training system. In applying SAT, training is undertaken on a planned basis in a logical series of steps. . . . Fundamental to the philosophy is that these steps constitute a cycle with the evaluation bringing about a reassessment of needs and a consequent refinement of the training given.

It emphasises three important elements:

- that training comprises a series of logical steps
- that these steps form a cycle, with constant evaluation and re-appraisal
- that training provision should be seen in the context of the wider organisation.

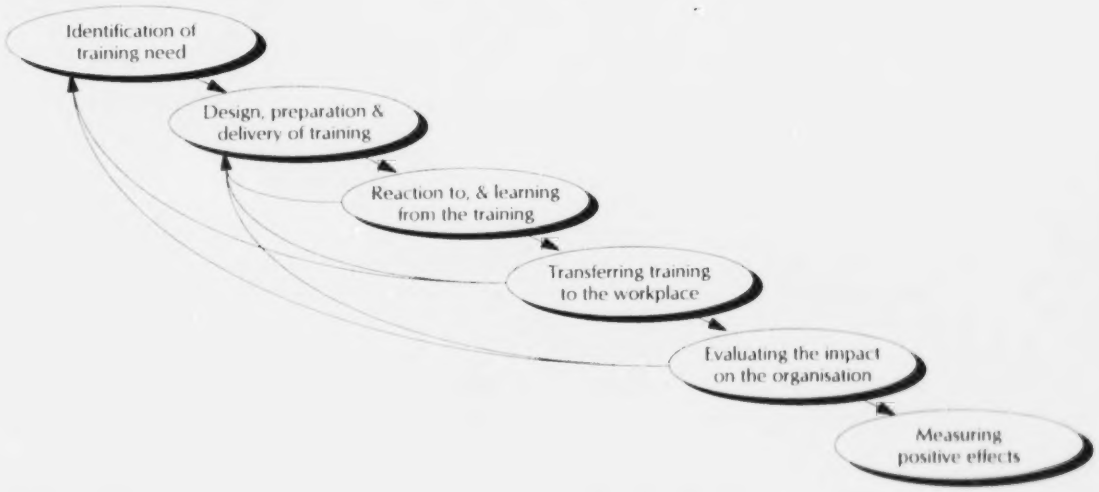
(taken from Spilsbury *et al.*, 1992)

What this model does do is emphasise the point that to measure the effectiveness of training is rarely something that can be done as a discrete activity after the training event has taken place: more often than not, the necessary information will simply not be available. Evaluation has to be considered *before* the training event takes place and in most cases, evaluation will be most effective when it is part of a system which examines the entire training process. Within this, the manager will still need to use appropriate tools to be able to measure the impact.

Below, we describe a model which has been synthesised from various different types of cycle (see, for example, Hearne, 1985; Kirkpatrick, 1983; Newby, 1992) which we believe takes account of all the major steps. The steps in this cycle are:

- Stage 1: identification of training need: examining what skills and attributes are necessary for the job to be undertaken, the skills and attributes of the job holder and the extent of the gap.
- Stage 2: design, preparation and delivery of training.
- Stage 3: discovering the trainee's attitude to training (reaction) and whether the training has been learnt (learning). Reaction involves the participant's feelings towards the training process, including the training content, the trainer and the training methods used. Learning is the extent to which the content of the learning event has actually been absorbed by the trainee.
- Stage 4: discovering whether the lessons learnt during training have been transferred to the job and are being used effectively in doing the job.

**Diagram 3:1 A training cycle**


Identification of training need
Design, preparation & delivery of training
Reaction to, & learning from the training
Transferring training to the workplace
Evaluating the impact on the organisation
Measuring positive effects

- Stage 5: evaluating the effects of the training on the organisation. This is the area in which there is perhaps most confusion, and subsequently little real action in the workplace.
- Stage 6: reinforcement of positive behaviour. It is optimal that any positive outcomes are maintained for as long as possible. It is not a rare event for changes in behaviour to be temporary, with a gentle slide back to previous ways of working.

It is important to note the feedback loops. Feedback on the process of actually delivering the training can come from the reaction and learning stage, the transfer of the training to the workplace and the evaluation of the impact of the training. The main feedback for the identification of training needs comes from an assessment of the transfer of work to the training and the evaluation of the impact on the organisation.

It is important to note that these feedback loops may consist of two very different types of information. Bramley (1990) notes that an evaluation can serve at least two purposes:

- to determine the worth of training to the organisation — a process best done by quantitative methods and with hard, numerical data
- allowing insights into the methods of learning, where the experiences of those involved are the main focus, thus using mainly softer, qualitative information.

There is obviously value in both of these positions. Bramley implies that the simultaneous satisfaction of both is difficult to achieve. This need not be the case, and perhaps a useful

distinction is one sometimes made between evaluation and validation, whereby:

- validation is that process which ensures that training meets its design criteria and objectives, and
- evaluation is about providing measurable outcomes from training which can be used to assess the impact on the workplace performance of participants.

In our view, a system to measure the effectiveness of training which is a useful tool for management has to fulfil both of these criteria. A system which tells you that there has been no added value as a result of training, but which does not tell you why, has not progressed the organisation very far. Similarly, a system which informs us that the training has met its design criteria, but does not let us know whether this had made any impact on the organisation, could lead to general feelings of frustration on any other than training professionals.

The system we outline below may be used to deliver information of both types. However, the point is well-made that different evaluation techniques can lead to very different outcomes, and the evaluator should know what they want out of the evaluation before setting out. In general terms of the diagram above, the feedback loops which flow into the *design, preparation and delivery stage* are validation loops, those which flow into the *identification of training need stage* are evaluation loops.

### The trainee viewpoint

The above explores the view from the organisation's perspective. It may be as well to realise that the individuals who are to participate in the training and development will see the process from a different perspective. Trainees have needs, views on those needs, and perceptions of the situations in which they find themselves. For individuals the process becomes:

- selection for training
- briefing and preparation
- becoming committed to learning
- learning
- preparing for transfer of learning back to the job
- returning to work
- transfer of training and improved efficiency
- maintenance of improved efficiency.

It is important for the organisation that the trainee knows that there exists a system for evaluating training. This is important

for two reasons: it emphasises to the trainee how important and seriously the organisation takes its investment in training: it is not a holiday, a few days off or a reward for previous good performance, but an investment in which the company is expecting a return. Secondly, a correct definition and statement of needs may put in place proper communication and forestall (or at least act as a counterweight to) unofficial communication down the internal 'grapevine'.

## 3.3 Summary

The training cycle as described above is not particularly new or novel, but we should note that:

- it is a robust way forward, and
- it is little used.

The point of describing it in the level of detail above is that it is the overall system that will be developed upon in the remainder of this text. In the next few chapters we examine each of these steps further.

# 4. Identifying Training Needs

## 4.1 Introduction

Identifying the existence and extent of the training need is perhaps the most important element in measuring the effectiveness of training. The realisation of this is not new: writing nearly 40 years ago on general principles of industrial training, Wellens (1955) noted that:

> *'Principle 1: No training project should be undertaken unless the purpose has been clearly defined. . . . This principle may appear trite, but if it were rigorously applied it would result in the disappearance of much so-called training at present undertaken.'*

One wonders how much has changed. Certainly we now have the tools to more rigorously determine training needs, but whether the collective will yet exists is somewhat more in doubt. Indeed, Mcdonald (1991) writes:

> *'Despite the amount of attention which is given to the term 'training needs analysis' one still observes department heads waiting to be told what training programmes are available for the forthcoming year. . . . rather than designing training to suit organisational or individual problems, we often work in reverse. That is, with a tempting array of existing programmes, we then look around for the problems or individuals to fit them.'*

## 4.2 Identifying training needs

The skill needs of the organisation need to be examined from two directions simultaneously: top down and bottom up. From top down we need to examine the new skills that the organisation requires, from bottom up the accumulation of skills from the individual jobs.

The analysis of training needs involves a three stage process: examining what skills and attributes are necessary for the job to be undertaken, examining the skills and attributes of the job holder and measuring the gap.

Ideally the organisation's skill needs should be addressed first, then the job analysis can be completed, with the individual's training need as the final component.

### 4.2.1 Organisational context

Traditionally, training has focused on improving the skills of individual workers with little attention being paid to the organisational context in which training takes place. Training should be devised in order to fit in with the overall aims of the organisation if time and money are not to be wasted. It should be remembered that training exists to serve the organisation, not the individuals who work within it: as Wellens (*op cit.*) again notes:

> *'Principle V: Training is not the prime concern of industry. . . . Industrial training cannot be judged by the same criteria as that of a schoolmaster or lecturer. It must be judged according to the way in which it furthers the primary purpose of industry.'*

An individual may attend an excellent training course but if this is at odds with organisational goals, the training will either not be implemented or will hinder smooth progress towards these goals.

It is clear from this that any training plan must be constructed which derives from and is clearly linked with the organisation's business plan so that training needs are related to organisational goals. Hussey (1985) found that only a third of British companies implemented such a policy. The situation may be improving: more recently the Employment Department's survey, *Skill Needs in Britain 1994*, shows that over half of establishments claimed to have both formal business and manpower plans. However, the survey does not indicate how thorough these plans are, or whether one derives from the other. Dench (1993) found that 67 per cent of workplaces in the EMSPS[1] survey had a business plan and 54 per cent a training plan. Where both of these existed, the nature of the link varied from being completely independent (12 per cent) to being formally linked (35 per cent). This has now been given greater prominence by the stress laid within the Investors in People programme of linking training to business objectives. However, a recent survey by *Training Trends* (1993) notes that most of the respondents do not know what the relationship is between the training plan and the overall business strategy. The situation seems to be one of vagueness rather than separation (only six per cent say that training plans are not formally linked to the business strategy). Perhaps this is indicative of the fact that we all know that the two should be linked, but that in practice they rarely are.

Jackson (1989) emphasises the importance of discovering the corporate objectives and gaining an understanding of how these will impact upon corporate needs. In larger organisations, discussions with the architects of the company's mission and

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[1] The Employers' Manpower and Skills Practices Survey.

central business plans may be unlikely to happen. However, it is worthwhile setting up a system whereby a dialogue can be maintained between operational directors and HR directors so that the personnel and training implications of any new developments can be put on the agenda. This has a number of advantages: it enables an early identification of what training and development may be needed in the future and it brings HR closer to the business decision-making process, from which it is often excluded until the last moment.

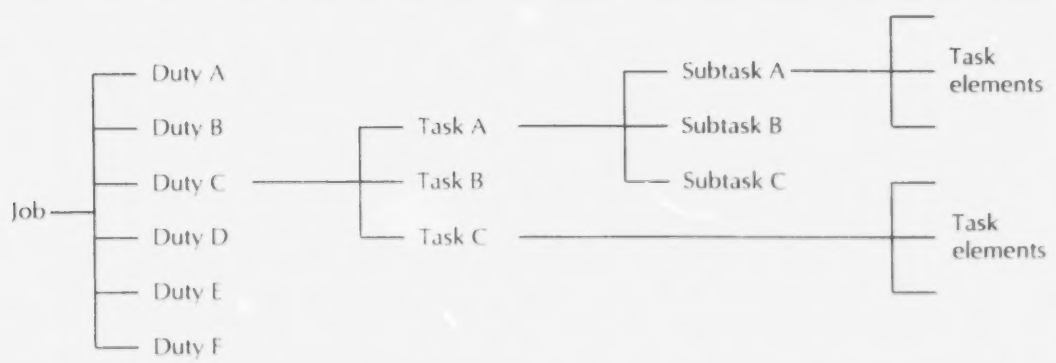
### 4.2.2 Job analysis

Job analysis identifies the duties which comprise the overall job. There are several methods for doing this including job observation or having an individual actually do the job for a short period (see, for example, Pearn and Kandola, 1993). However, possibly the easiest method is for the job holder and the job supervisor to describe the actual job and the tasks involved. Tasks are drawn together in a scalar fashion, with a hierarchy of levels as shown in the diagram below. Weighting has to be applied to their frequency and their difficulty to decide on the relative importance of each job task. The three-dimensional matrix outlined in Chapter 2 (task importance, frequency of performance and difficulty) is also applicable at this stage.

However the job analysis is conducted, it is important that it remains flexible and changes as the nature of the organisation changes. The nature of the job may change as the employee performs routine tasks. More significant, perhaps, will be 'top down changes', where a change in the organisation's approach will necessitate changes in the jobs done by individuals.

The outcome from the job analysis should be drawn together in the job description, which is a description of the tasks that individuals will be required to undertake in the performance of their jobs. It should be noted that at this stage it is an abstraction, not related to any particular individual's ability to

**Diagram 4:1 Scalar job hierarchy**



do the job, but to a range of activities that are required to be completed and a statement of the level at which these activities need to be done.

A final point on conducting a job analysis is communicating with staff and staff representatives. Trade unions or staff associations will naturally have an interest in the design of jobs and the subsequent contribution of training. Most trade unions will want to contribute views to the process, and agreement should be reached on how this is most easily done and at what stage it would be most useful. A job analysis will also involve contacting a range of staff, particularly if it is being done afresh. It will probably be helpful if staff are informed about the analysis, why it is taking place, who is involved and the timescale. It is particularly important to stress the positive aspects of the analysis and give the necessary assurances of confidentiality.

**Development of competence-based job analysis**

The development of National Vocational Qualifications (NVQs) and their attendant Occupational Standard for a wide range of jobs has gone a long way to facilitate the recognition of individual job tasks. These new national standards for vocational skills are now being introduced in most industries and are based on competence in a given occupation, not on completion of a training programme. The levels of competency required for a given task are clearly specified and they are assessed in the workplace by the line manager. The standards themselves have been set by employers through the Industry Lead Bodies for each industry. The role of the supervisor as an assessor of the trainee means that the effectiveness and appropriateness of the training programme will be much more directly apparent than in the past.[1]

The Management Charter Initiative is an attempt to provide coherence and clarity in the field of standards of managerial performance. Again, this is an employer-led initiative with firm backing from the Employment Department. The MCI is developing competence-based standards for all levels of managers, from supervisors to senior managers. The need to set standards in this way is a response to the relative lack of formal training for managers in Britain, especially those over 35. This has led to the process by which managers are given credits for their previous experience, called Accreditation of Prior Learning. The APL takes the form of an assessment which can then lead to the award of a formal credit toward a qualification. Levels of competence for supervisors and middle managers have now been set but the senior management competences are still being

[1] For a fuller description of NVQs and their implementation, see J Toye and P Vigor, 1993.

developed reflecting the difficulty of assessing the more complex levels of managerial tasks.

The Council for National Academic Awards has developed a scheme which allows companies to have their in-company training programmes assessed so that an academic qualification can be awarded to the participants. Credits are awarded for various parts of the company training scheme and these credits accumulate towards a certificate or diploma of higher education or an honours degree. This process of credit-rating for in-company courses is known as the Credit Accumulation and Transfer Scheme (CATS). The advantage is that it provides extra motivation to staff to achieve well on the company courses and allows achievements to be given formal recognition. The evaluation of company training is done by academic staff from a local polytechnic, university or college.

### 4.2.3 Individual training needs

At this level, the comparison is the attributes of individuals against the job description (as described above) in order that gaps may be identified. These gaps are the individual training need. If a job specification has been successfully completed, detailing task, skill and knowledge analysis, any deficiencies should be apparent. However, there are a number of more formal methods of undertaking this analysis:

- Measurement of attainment against pre-set performance criteria. This is particularly appropriate for relatively low skill, mechanical, repetitive tasks which can be measured electronically, *eg* scanning rates at supermarket check-out tills, keyboard skills.
- Performance appraisal by line managers, which identifies strengths and weaknesses of individuals.
- Use of assessment centres to identify promotion potential, particularly among management staff.

*Training Trends* (1993) notes that 62 per cent of organisations formally assess individual's training and development needs at least once a year, with a further 30 per cent also doing this but only for some grades. This is a general confirmation that there is a trend towards the use of individual performance appraisals by line managers and these are generally seen as being the general answer to the majority of problems on the training need analysis.

However, a closer analysis would indicate that such performance appraisals are not appropriate for this particular task, but may be a useful means of *beginning* to identify training needs. Bramley (1991) stresses two reasons why this is the case, in that:

**Assessment centres**

The assessment centre is not a place but a technique. The objective of an assessment centre is to obtain the best possible indication of a person's actual or potential competence to perform at the target job or job level (see Woodruffe, 1990). Several people will attend the assessment centre at one time and will be observed by a team of assessors. Commonly, there is a ratio of one assessor to two participants.

The focus of the assessment centre is on job behaviour. Participants will be judged according to their performance in set exercises, such as:

- in-tray exercises
- analytical exercises
- simulated meetings with customers.

A 1989 survey in the UK found that one third of large companies (employing more than 1,000 people) had used an assessment centre in the past year. They are not used universally but just for selecting particular groups such as graduates or managers.

The assessment centre is a high cost method of selection because of the high assessor/participant ratio. However, it is perceived by employers to give a very accurate and high quality assessment.

- a performance deficiency raised in a performance appraisal need not mean automatically that there is a training need. Job situation factors may have a greater influence on job performance than on an individual's skill level.
- training need is related to job performance and not to an individual's desire to attend a particular route of training and development. Training needs as defined here are job-related. Occasionally, a company may recognise undertaking the learning process as an end in itself. This may be worthwhile, but its separation from the immediate job-related training needs to be acknowledged.

As noted above, the performance appraisal may lead to an area being raised, but it may not lead to an appropriate training need being analysed. In particular, it may not result in a training need that has been specified in a way that is suitable for measurement at a later date. In these cases consideration should be given to:

- a further meeting to discuss only the training need. Performance appraisal meetings are often crowded meetings, with a full agenda. At a separate training needs meeting, the participants can focus fully on what the training need is, how it manifests itself and suitable actions.
- analysing the situation further to identify the exact nature of the problem (see the text box below).

The most commonly named problem is that alluded to in the example above: how to identify and specify the training need in a manner that allows quantification for later comparison. This is

**Identifying a performance deficiency**

The company identified, in its annual performance review, that one of their sales team was not performing as well as others of the same grade. This particular member of staff was relatively new to sales, having been transferred from elsewhere within the company. The actual training needs analysis was deferred to a separate meeting.

At this separate meeting, it became clear that as the individual was new to the post they had some difficulty with approaching clients. This tended to reflect itself in 'displacement activity', whereby the individual felt more easy to cope with clients on the telephone rather than face-to-face. However, there was no available benchmark information available to compare the amount of time that this individual spent on the telephone, compared to others in the sales team.

The agreed first step was to gather data. The individual concerned and a sample of others in the sales team logged their activities, noting the proportion of time that they spent in face-to-face meetings, the amount of time spent on the telephone and the nature of the meetings/calls. The feeling about displacement activity was confirmed, with the 'problem' individual telephoning rather than visiting, and writing rather than calling.

As a result of the analysis, the line manager was able to set targets for the individual to work to, whilst at the same time giving greater training on product knowledge to boost the individual's confidence. The impact of the training was noted in both measurably changed behaviour (process indicator) and measurable changes in sales (output measure).

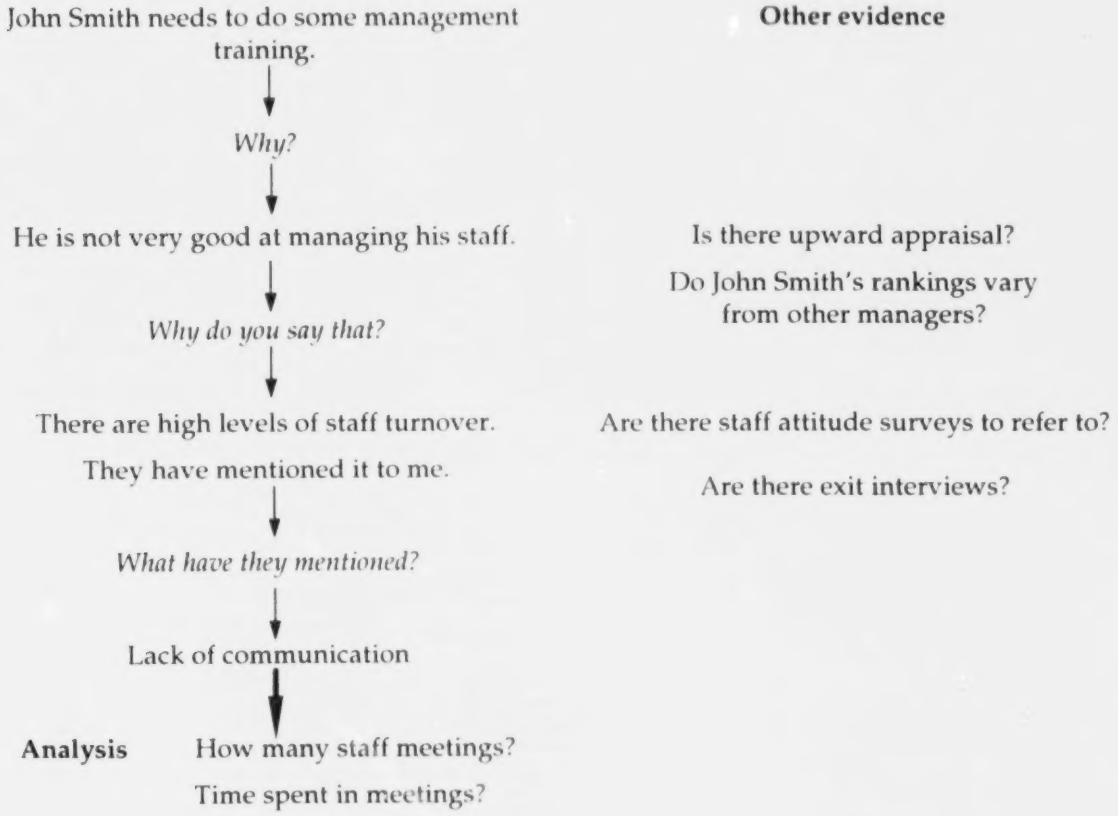
most easily addressed by persistent questioning: then the most useful word here is 'why'. When given the reason that the outcome is impossible to determine, simply ask 'why is the training taking place?'. The response, in the first instance, will normally be suitably vague, at which point 'why' (or some other suitable form) is asked until a definable objective is reached. If no definable objective can be reached, then the reason for going ahead with the training must be queried. The technique is suitably simple, albeit at the expense of the questioner seeming initially troublesome, but it does seem to generate responses that are useable. The example below is a fictional example serving merely to indicate the principle.

## 4.3 Costing the skill deficiency

Perhaps the most common request on information is to show the return from training in financial terms. The timing of the request — usually after the training event and not based on a concrete training needs analysis — makes it impossible to comply. If this information is likely to be important, then collecting the appropriate information must begin at this stage.

With the process described above for identifying performance deficiencies, the appropriate tools are in place for estimating how such under performance is costing the organisation. To devise a financial figure requires some assumption to be made, and as with all such exercises, some errors will creep in.

**Diagram 4:2 The 'why?' chain**


John Smith needs to do some management training.
Why?
He is not very good at managing his staff.
Why do you say that?
There are high levels of staff turnover.
They have mentioned it to me.
What have they mentioned?
Lack of communication
Analysis
How many staff meetings?
Time spent in meetings?
Other evidence
Is there upward appraisal?
Do John Smith's rankings vary from other managers?
Are there staff attitude surveys to refer to?
Are there exit interviews?

However, there is a procedure to make this estimation. Essentially this includes:

- assessing the performance of the workers, identifying areas of shortfall
- estimating the costs of the shortfall, including time spent by the individual and the line manager, based on salary costs
- extrapolating the costs across all managers within the organisation.

Such an exercise was carried out by Coaley (1993) and is described briefly in the text box below.

## 4.4 Who does the training need analysis?

There is a question over who actually does this task. There is not a single answer to this as much will depend on the organisation of the internal personnel and HR function. However, as Rae (1991) points out, it will be the line manager and the individual

**Costing performance deficiences**

Coaley (1993) describes an exercise, undertaken for a major UK company, to cost the investment in management training. The first stage of this was to identify the cost of performance deficiences.

Losses made by the employing organisation were found to consist of four kinds:

- direct costs of mistakes
- direct costs in order to rectify mistakes
- indirect costs of time wasted at different levels
- indirect costs of loss of business.

Both the time wasted and the loss of orders can be given a financial value, in the first case through the knowledge of salary levels. A wasted day can be translated into financial terms through a simple calculation. The total costs of poor performance is then calculated by a simple addition of these factors.

The procedure took the following steps:

- Structural interviews conducted with line managers in order to identify problem situations related to average workplace performance.
- For each 'situation', line managers were asked for details of costs in terms of cash paid out to rectify the situation, lost orders for the company and time wasted. Salary levels were recorded in order to evaluate the financial costs of wasted time.
- The findings were collated and analysed. Only directly stated and quantified costs were involved in the analysis: where there was a significant element of doubt, statements were not used for calculation, which means that overall organisational costs may be greater than those estimated.

For the company involved, line manager financial costs amounted to £25,576 in total (£881 per individual) and time costs at 982 hours over a 12 month period. It suggests wasted line manager time of three to four per cent annually.

who will be in the best position to identify training needs: they are on the spot, know the work and should be able to identify quickly and easily any problems which may have a training solution. However, the personnel/HR specialist still has a role to play, and may regard the identification process as being a good way to involve the line manager in the training process. If the personnel/HR specialist simply accepts the demands of the individual/line manager, then they are abandoning their role. Ideally, they should act as consultants or advisers, interpreting the expressed demands and producing a best solution. This may be a training solution or it may not.

## 4.5 When training needs may arise

Rae (1993) identifies a number of areas where training needs will arise. Nearly all of these involve some kind of change either for the organisation or the individual. It is worth noting these since

an awareness of these change areas will help in recognising the need for a training needs analysis (particularly when there is no formal appraisal system). In addition, an understanding of the reason for the training need may give some indication of the learner motivation (discussed later in Chapter 6). Rae's main categories are:

- **A newcomer to the organisation**: Rae notes that basic training may be necessary if the individual has no work experience. Occupational training will be given for those entering a new occupation. In practice, most employers offer, in addition, induction training to all new employees, which covers specific company information, which it cannot be assumed would be gained elsewhere, but is important for the successful performance of a job within the new organisation.
- **A change of work in an existing department**: work of a department often changes, requiring either re-orientation of old skills or the acquisition of new skills. The constant search for improvements in the efficiency and quality of work also requires new skills to be constantly developed for many employees. All these require a training or development response.
- **Improvement of a poor performer**: identification is usually quite simple, *via* the normal line manager reporting mechanisms.

There are two further areas where Rae notes that a training need may arise: developmental and in preparing an individual for promotion or progression through the organisation. This is an area where the model described above for measuring the effectiveness of training is most weak. Indeed, it has been argued that improvements in systems to measure the effectiveness of training may actually lead to a decrease in longer term developmental training, as the links between investment and benefit become difficult to identify and therefore show the lowest return. The logic of this argument suggests that longer term developmental training becomes the onus (and ownership) of the individual rather than that of the organisation.

### What is not a training need?

Newby (1992) gives a list of reasons for training that can not be considered a training need. These include:

- **R & R**: training is sometimes considered a perk of the job: a reward for good behaviour and a respite away from the day-to-day rigours of work. This is a common phenomenon, often typified by the most rigorous post-training evaluation of 'did you enjoy yourself'. Training should be enjoyable, but should not be the point of the exercise: if it is, then it should not be expected that one can demonstrate a return on the 'investment'.

- **Solution in search of a problem**: training courses can gather their own momentum and become a fixed item in a training calendar, particularly if based on a once perceived need and if the trainers enjoy their delivery. A view needs to be kept on the continued relevance of the training.
- **Fads**: opposite to the above is the latest craze of the month. Management science is particularly rife with grasping new ideas, sometimes without an over close questioning of what it really has to offer. A sharply focused assessment of training needs is an insurance against this faddism.
- **Need to spend budget**: a less common problem in recent years with increased pressures on training budgets, but the need to spend the training budget before the year end can lead to training not linked to the business's real training needs.
- **Training as part of the employment package**: often training is offered as part of the recruitment package. Whilst there is nothing explicitly wrong with this, a balance has to be struck between the needs of the individual and of the organisation. As has been noted above, training is not industry's prime function and should be designed to promote business activity.
- **Solutionism**: often training is reached for when the root of the real problem may exist elsewhere. This often happens in appraisals, where instead of rigorously examining the situation, training can be seen as a quick fix. A special case of this is when the order for the training comes from individuals in positions of considerable authority (*eg* the MD).

This is not to say that some of this may not have valid organisational reasons behind them: giving staff R & R, or spending the remains of a budget, may be an appropriate means of reward, and a 'training course' may therefore be an appropriate response. However, the reasons why this activity is being undertaken must be explicitly recognised and a contribution to the bottom-line not expected.

## 4.6 Summary

It is difficult to over-stress the importance of a correct and rigorous identification of training needs as a necessary first step in measuring the effectiveness of training. If this is not done correctly, then the validity of all else which follows is weakened. The main message is to achieve clarity: analyse what skills the job requires (and will require in the future) and analyse what deficiencies individuals have, aiming at all times for a quantification.

# 5. Design, Prepare and Deliver Training

## 5.1 Introduction

Once the training needs have been identified, the training programme can be designed. In this chapter we stress only two aspects of the design and delivery of training: the need to specify objectives and determining the nature of the provision.

## 5.2 Specifying the objectives

Although possibly stating the obvious, the preliminary step is to identify the objectives of the training programme before it is designed. At least, this would be an obvious statement if it were not the case that it seems to be done infrequently. *Training Trends* (1993) finds that only a third of responding organisations say they have a policy that objectives for each training and development programme are defined before the programme exists. Only a minority say that they do not, with the majority stating they do not know.

There may be different levels of objectives, primary and lower level, but all the lower level objectives must build into the primary objective at some stage.

Points to consider:

- Minimise the number of primary objectives as far as possible. The more objectives exist, the greater the possibility of confusion.
- The objectives must be measurable and achievable.
- Make sure that the objectives are clear, precise and unambiguous. They should be understood by everyone to eliminate confusion.
- Are the objectives consistent, in that the attainment of one will not be contrary to the achievement of another?

Above all, the objectives should be explicit and precise. As Newby (1992) notes:

> *'Training is like any other organisational activity: the clearer the picture of what you want to achieve, the easier it becomes to plan the means and the greater the prospects of achieving success. Ineffective*

*training adopts a scatter-gun approach, rather than pinpointing the target. It is characterised by learning objectives which use weasel-phrases such as '. . . will gain an awareness of . . .' and '. . . should understand . . . ' Effective training designs are characterised by objectives that clearly state what the trained person will be able to do when back in the workplace.'*

Where a systems approach is fully operational, objectives should be available from the initial training plan.

## 5.3 Determine the nature of provision

### Structuring the training experience

The next stage is to decide on what is the best mode for delivery of the training. There are no 'right' answers in this case and the correct balance must be found for each organisation. However, as Bramley (1991) points out, there are a number of questions which might usefully be asked at this stage, including those shown in the text box below.

**Course structure**

- On what basis has the course been structured?
- Is there a satisfactory balance between practice, reflection and theory input?
- How satisfactory is the duration of the course and the length of the working day?
- Does the balance of the course reflect the different degrees of importance attached to the objectives?

**Methods and media**

- On what basis have the methods been chosen?
- are optimal methods being used, given the characteristics of the learners?
- do methods and media provide variety and encourage learning?
- what is the quality and readability of hand-outs, computer-based training material and training aids?

*Evaluating Training Effectiveness*, Bramley, 1991.

All jobs will require the holder to have some knowledge. The extent and nature of knowledge required will determine in part, at least, the objectives (*ie* the content of the learning). The nature of the learning (*ie* method) will be determined by selecting the most appropriate method to achieve the objectives. The type of knowledge needed will have been defined by the identification of training needs process, and particularly in the job description. A useful distinction of levels of jobs is:

1. A basic level, handling isolated information or a few pieces of information. For example, being able to fill in a simple form or record sheet, or record simple numerical information.
2. A higher level requiring the job holder to understand or use several pieces of isolated information at the same time in some form of procedure.
3. A third level, requiring the job holder to analyse the information and act upon it.

For a detailed discussion of such a hierarchical framework readers could refer to the standards published by, for example, ALBSU or summarised by Atkinson and Spilsbury (1993).

These three different levels have quite different implications for the way training should be delivered:

1. Isolated facts can be transferred easily by lectures, paper-based texts or other open-learning techniques.
2. Procedures can also be transferred fairly easily by the same methods, although the use of some supervised practice is also usually recommended.
3. This will need knowledge on the other two above and then practice in realistic situations. This can only be done in simulated situations or in closely supervised real work situations. If simulated situations are used, the criteria (*ie* the standards and conditions) must be clearly stated in the objectives of the learning.

### On and off-the-job training

A particular issue may arise whether the training should be off-the-job or on-the-job. In an ideal situation, an individual would begin a job in a state of readiness. In reality this is not likely to be the case and some further on-the-job training will be necessary. This is not a particular problem if this is explicitly accounted for, taken into consideration and recorded (see the example from the Royal Navy below). Indeed, in some situations an element of on-the-job situation may be preferable, as the work situation cannot be replicated in a training situation. However, if training is conducted on-the-job, the criteria for this should be no different than classroom-based training, *ie* it should have objectives and measured outcomes.

Rae (1992) considers on-the-job training to be a highly effective, flexible, relatively low cost approach to training and to be an important development given the prevailing economic climate for the training professional. Whilst not the complete substitute for off-the-job training, it can play an important role in training and development of the workforce.

The Royal Navy lays down standards of job performance (an Operational Performance Statement, or OPS) and also statements of what an individual will be able to do at the end of any particular training period (a Training Performance Statement, or TPS). The difference between the OPS and the TPS is termed a Training Category and classed on a scale of one to five, such that:

- TC1 determines that 95 per cent of operational performance must be equal to the training performance: effectively that the individual must be able to perform their job on posting;
- TC5 is token off-the-job training: nearly all learning is undertaken in the operating environment.

All on-the-job training is logged in a 'task book', which details the task (what the trainee actually had to do), under what conditions (in dock, at sea, etc.) and to what level of performance. The task book is an official record of achievement and has to be counter-signed by an appropriately qualified and ranked individual.

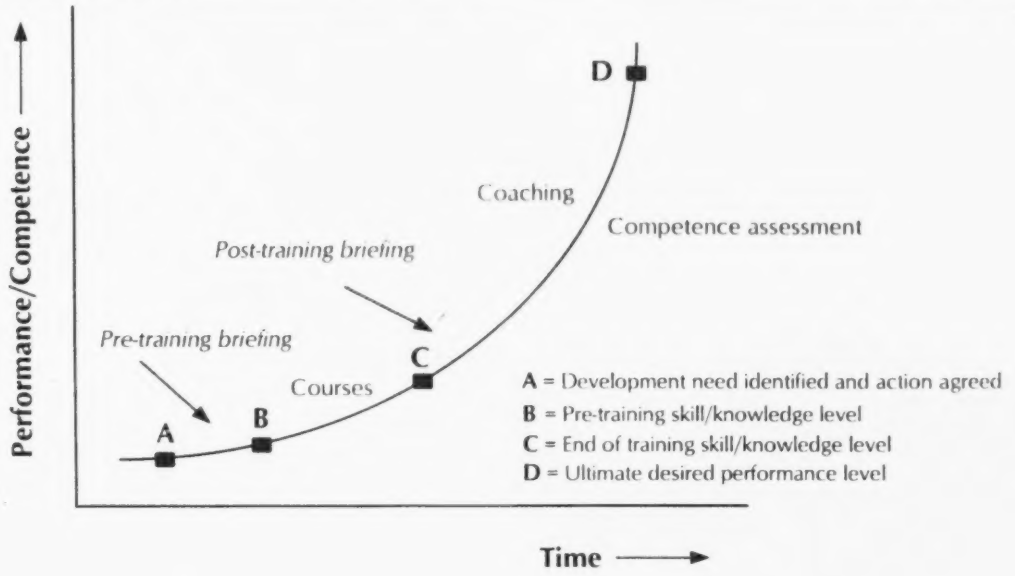
Taken from *Training in the Armed Services*, Spilsbury *et al.*, 1992.

The Post Office Training and Development Group explicitly recognise the importance of some element of on-the-job training or coaching is necessary. They note that:

> *'It is unlikely that the ultimate desired standard of performance will be achieved during the training. The ultimate standard will only be achieved by the learner, putting into practice the new skill/knowledge over a period of time and receiving on-going coaching from the person requiring the improved performance (line manager).'*

The situation is reflected diagrammatically below.

**Figure 5: 1 Part of a typical learning curve**




*Source: The Evaluation Model, The Post Office, 1994*

Some consideration needs to be given to who actually conducts the on-the-job training and in what circumstances. As seen above, the Post Office believes that the appropriate model is to have the line manager as coach. Rae (*op cit.*) notes, historically, the image of the on-the-job trainer has been someone who has tended to be someone who has worked in a manual capacity and who has been drafted into the job with little or no training. The situation in practice is significantly differently from this and there are a number of different options available when providing on-the-job training:

- **GAFO**: the simplest method: 'Go Away and Find Out'. At its crudest, the potential trainee approaches someone who is supposed to hold information and is told to 'GAFO'. However, it can also be a real learning opportunity if sufficient open learning support systems are in place. In these cases, trainees need to be taught how to learn and how to use the training materials, in whatever media are available.
- **Sitting with Nellie**: the trainee is placed under the tuition of a worker (Nellie) in order that they can learn the appropriate skills. Often derided, it can be one of the most effective means of training, as there are few situations in which training by this method cannot be achieved. However, as a method, it has frequently failed in the past because the 'trainers', whilst having the required occupational skills, may not necessarily have the teaching/tutoring skills or given the resources or support materials with which to pass on their expertise. The training may also be unstructured, (*eg* lacking objectives) perhaps even to the extent that it is not recognised as training.
- **One-to-one instruction**: an extension of the above, with the exception that 'Nellie' is actually a qualified trainer for the organisation.
- **Coaching**: the manager or supervisor will select work-related tasks for the trainee to perform, and ensure that they are performed correctly. This form of training should ideally be on-going, as a manager can constantly be seeking opportunities to develop staff from circumstances which develop within the workplace.

## 5.4 Summary

There is a great deal of literature which deals with appropriate design and delivery of training and it is not the main focus of this report and so is dealt with only briefly.

It may seem a statement of the obvious, but the major issue again revolves around clarity, particularly the need for a definition of the objectives of any training event. Without this, the link between the identification of training needs and the actual damage is weakened.

When measuring the effectiveness of training is considered, the view is that only training events (seminars, training courses, workshops, *etc.*) are applicable. This is not necessarily always the most appropriate method and so we have included a brief section on on-the-job training. With regard to evaluation, the same principles apply as for off-the-job training and should be applied with the same rigour.

# 6. Initial Testing: The Trainees' Attitude to Training and Whether the Training Has Been Learnt

## 6.1 Introduction

This chapter involves the initial testing, which deals with assessing the trainees' reaction and learning of the training, where:

- **reaction** is the participant's feelings to the training process, the trainer and the training methods used.
- **learning** is the extent to which the content of the training programme has actually been absorbed by the training.

## 6.2 Reaction

Most training is evaluated at the 'reaction' level by administering a short questionnaire, the so-called 'happy sheet', at the end of the training programme. Finding out how trainees felt about a training programme by means of a questionnaire after the course is the most prevalent form of evaluation used by employers. However, it is not the only method used: *Training Trends* notes that whilst 63 per cent of employers use such questionnaires, a quarter also use interviews or feedback sessions.

It is important to find out these responses and to use them to feed back into training design but as a method of evaluation alone their usefulness is limited. The main purpose of these is to find out about the training experience: was the delivery adequate, were the conditions of the training event amenable to learning, *etc.*

Happiness sheets are most commonly seen or used when trainees are sent away on an off-the-job training experience: they are away from work and are given a discrete time to actually record their views. This need not be the case and happiness sheets have an equally valid role to play in recording views about on-the-job training experiences — a fact often overlooked. As on-the-job training constitutes the majority of learning experiences, it is as important that the employer/trainer is aware of the nature and reaction to the training for these experiences as the more traditional removed 'events'.

Happy sheets are often derided, perhaps unfairly. They have a role to play in that they can provide valuable information about the training experience. The disregard concerning their use has probably arisen because of the extent that companies use them in isolation. However, they should be seen for what they are and their misuse in the general evaluation framework should not detract from their immediate value.

## 6.3 Learning

If the training has to lead to changed behaviour on the part of the trainee, then it must have led to some skill or knowledge being imparted and learnt by the trainee. The training will not therefore transfer itself to the work environment if it has not been learnt: a set of new learnt knowledge tests is therefore not an unreasonable way forward.

### 6.3.1 Testing for learning

As we have seen, the type of knowledge that has to be transferred will vary hugely according to the nature of the job and so, therefore, will the means of finding out whether it has been learnt. We are fortunate here in that much of the training effectiveness literature is concerned with setting out techniques which assess this learning level, and there are many readily available techniques for testing whether training has been learnt. The precise method chosen will depend on the type of training itself. Simple, repetitive skills, like using a keyboard, are easily measured before and after training. Similarly, training on specific topics, for example, product information for sales personnel, is relatively easy to test. In general, the more complex the training the more difficult it becomes to test learning. Bramley (1991) describes techniques which can be used to test knowledge learned during a training programme and a summary is given below.

The value of such tests can be enhanced by their use in conjunction with pre-tests. If the trainee is tested at the outset, then re-tested, then the gain in knowledge can be tested. There are issues to consider both in undertaking the tests and in interpreting the scores. A few points to note are:

- When deciding to do this, have a viewpoint about the existing state of knowledge. It is a wasted effort to test trainees, only to confirm that the trainees know nothing before the training takes place.
- The trainees will need reassurance before the pre-test. It can be very demoralising undertaking any examination in which one cannot answer the questions, particularly when the event is designed to prove that the trainee does not know.

**Knowledge testing**

There are a variety of ways to test knowledge depending on the type of knowledge that has been learnt. Here we list a few of these techniques:

- **Open-ended questions**: the traditional way of testing knowledge, used frequently in education *via* the essay system. Requires both regurgitation of facts, but also requires the student to construct a logical argument. This is important for some, limited, professional jobs, but is often a skill which is completely irrelevant in many jobs.
- **Short answer items:** often a form of open-ended questions used to test knowledge of individual pieces of information. They can also be used to test powers of analysis. The questions start with a verb such as *State, List, Label, Calculate, Determine, Define.*
- **Objective test items**: very suitable for testing low levels on the knowledge hierarchy. The trainee is asked to write only one or two words, or choose the correct alternative from a number offered: the most common form of these multiple-choice questions. Another variant is the true/false question but which is only really suitable for testing trivial information and must be corrected for guesswork.

Each of these has their drawbacks. Objective test questions can be very easy to set, but laborious to mark, with the ranking depending on the markers viewpoint and logical construct as well as the trainees. Multiple choice items can be marked by someone with no knowledge of the subject, but the questions are more difficult to construct. Scores must also be adjusted for guesswork (a candidate with no knowledge whatsoever should still score about 50 per cent on a true/false type of test).

Taken from Bramley, 1991.

- It requires the production of two similar but different sets of questions and making sure that the trainees know this. Replicating the same test will result in the trainees tending to concentrate on those items which came up in the first test.
- Calculating a **gain ratio**. The gain ratio can be calculated using the formula:

$$\text{Gain ratio} = \frac{\text{Post - test score} - \text{Pre - test score}}{\text{Possible score} - \text{Pre - test score}} \times 100$$

to give a figure for each candidate. Bramley (1991) suggests that average gain ratios for a whole should vary from 20 per cent (for short lectures followed by questions) to 70 per cent with individual instruction on programmed packages, although others suggest that it is difficult to state what the gain ratio should be in such abstract terms. Its primary use may well be to improve a training event over time, with an extension to a possible benchmarking tool for more sophisticated companies.

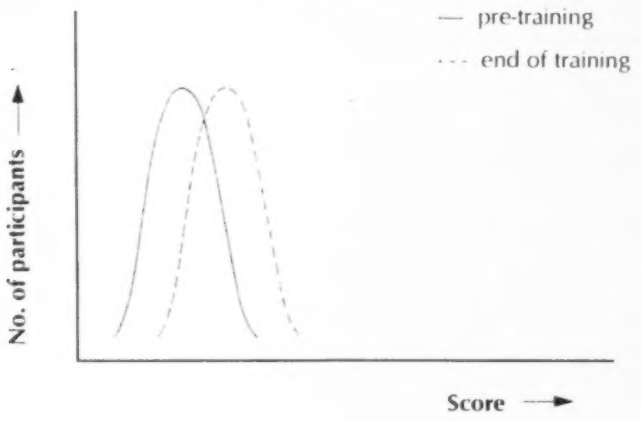
- Be aware of different starting-off points. If someone had a good level of knowledge before the training then their gain ratio will be very low. This indicates that they have not been particularly stretched and the training not as valuable as it should have been — certainly not as valuable as for those who started with low knowledge and have a high gain ratio.

The value of the information here may be that it points to an inadequate training needs identification, as well as deficiencies in the design and delivery.

The Post Office use information generated by pre- and post-test scores to identify the overall usefulness of the event, not as a test of individuals. They give three examples of pre- and post-test distributions.

In a 'not much learning event', the learning event has failed to make any significant increase in the participants' skills or knowledge.

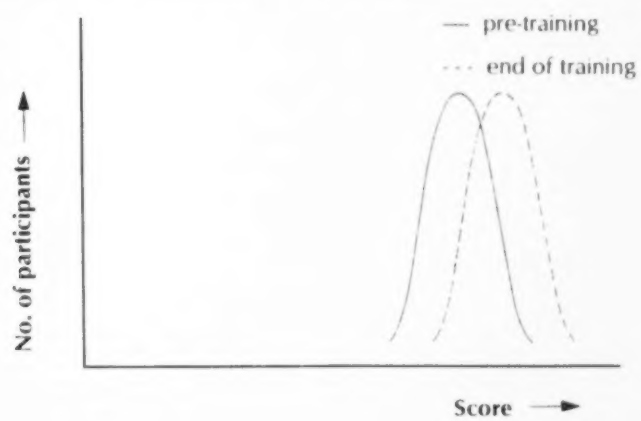
**Figure 6: 1 A 'not much learning event'**




*Source: The Evaluation Model: Using Level 2 Information, The Post Office, 1995*

In the 'everybody knows it already' event, the results suggest that the participants were already proficient in the subject areas before the training.

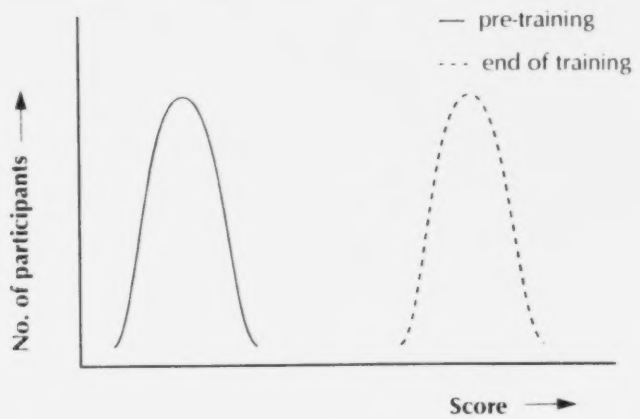
**Figure 6: 2 An event where everyone knows it already!**




*Source: The Evaluation Model: Using Level 2 Information, The Post Office, 1995*

The ideal event is where the pre-test average scores are as far to the left as possible, whilst the average end-of-training scores is as far to the right as possible.

**Figure 6: 3 The ideal event**




*Source: The Evaluation Model: Using Level 2 Information, The Post Office, 1995*

Of course, the pre-test scores could be used as a screening device to ensure that the most appropriate participants are selected. In agreement with the training sponsor and the trainee's line manager, information could be provided to identify participants who have the potential to gain the most from a particular event. Participants could be grouped together in a way which reflects their existing level of skills/knowledge, thereby avoiding wide variances in participants' pre-training levels, allowing training to be targeted at the appropriate level and maximising the learning potential for all concerned.

Training to achieve a change in attitudes and interpersonal behaviour (for example, in management training) can be tested using techniques such as Repertory Grid analysis, but these are complicated to administer. We do not describe these in full, but details of these testing methods can be found in Bramley (1991), Rae (1991) or Newby (1992). A brief description of the technique can be found in Bevan (1989).

In general, problems with testing arise because they test what a trainee knows at a particular point in time. They may forget information fairly promptly but also they may have a weak *understanding* of it. For these reasons, it may be more appropriate to test by means of an activity (related to the work situation) which trainees must perform accurately. It may also be useful to follow up the initial questionnaire six to 12 months after the course, because benefits may take some time to be realised or alternatively may be quickly forgotten.

### 6.3.2 Reasons why learning may not have taken place

If tests for learning take place and it is found that very little learning has taken place, then it is not unreasonable to ask why not. There are two general areas where the learning process failed:

- failures in the delivery of the training
- motivational problems amongst the trainee.

Failures in the delivery can arise for a number of reasons: inadequate content, poor training materials, poor design *etc.* Motivational problems can arise because the individuals concerned do not have sufficient willingness to learn: learning takes place fastest when individuals recognise the need for training and are committed to it. What, for example, is the trainee's motivation for joining a particular training programme?

More problematical from the evaluation process is to distinguish between the two. Once it has been established that learning has not taken place then what steps need to be taken? As Analoui (1993) points out, there is no easy way to measure commitment in an individual employee, but suggests that attention should be paid to the trainee's approach to learning, the rate of attention paid to learning activities, the regular attendance to training sessions, the degree of concentration brought to bear and the presentation of the output, which all provide subtle clues or indicators to allow an assessment of the 'will' and 'commitment' on the part of the trainee. Rae (1993) notes that motivation of the trainee will vary according to the original stimulus for the training need (see Chapter 3 above). In general terms, Rae assumes that motivation can be assumed in the case of the newcomer who is identified for potential progress. The same assumption cannot be made for training which has arisen either as a result of an identification of performance deficiency or where there is departmental or organisational change. In these cases, the evaluator needs to be more aware that there may be motivational problems in the trainee or trainees. Motivation could be improved if the trainee is consulted in advance about the training that is to be given and the reason why it is being given. *Training Trends* (1993) finds that, whilst 80 per cent of employers do the former, less than half actually tell the trainees how the training fits into the overall business objectives of the organisation. Views on the quality of the training will already have been gathered in the reaction phase.

It is to be remembered that we are talking here about gathering what is essentially 'soft' information on why a training event has failed to impart learning. Feedback will be to the training design and delivery, but little will be able to be fed on to an assessment of the benefit to the company. If learning has failed to take place, then in most cases we can assume that this is about zero.

## 6.4 Summary

Finding out trainees' initial views of the training event (whether by the 'happy sheet' or some other method) is the most commonly used, but because it has been used mainly in isolation, it has become much derided. Discovering whether the training has been delivered in such a way as to make the learning process more effective is obviously important, but it needs to be seen in the context of an overall system.

Testing to ensure that the training has been absorbed by the trainee is clearly an important element in measuring the effectiveness of training. Only if the knowledge has been learnt can there be an effective transfer to the job.

# 7. Transferring the Training to the Job

## 7.1 Introduction

What the company needs to know is, not only that the trainee has enjoyed the learning experienced and has enhanced their knowledge, but whether it has improved performance in the workplace. The fact that the training has been learnt by the trainees does not mean that there will be automatic changes in behaviour on the job. It is quite feasible that learning can take place, but behaviour may not change. This chapter examines why such transfer may not take place, and then examines possible responses to the failed transfer.

## 7.2 Reasons why transfer may not take place

There are a number of reasons why new skills may not be applied in the workplace, including that:

- the work situation does not support the new training
- the trainee thinks the training programme is irrelevant
- the trainee has no motivation to apply the new skills.

It is wise not to under-estimate the power of inertia within a working environment. While training may lead to improved performance in the classroom, these changes may not be strong enough to overcome resistance to change back at the workplace. For example, it has been found that individuals who are singled out to receive training apart from their colleagues are often socialised back into old behaviour when they return to their own departments (Ottaway, 1986). The transfer of training does not occur, not because the individual does not acquire the necessary skills, but because of peer influence and the lack of an appropriate support/reinforcement mechanism.

An example of the work environment not supporting a training programme can be found in one of our case study companies. This company trained their cashiers at a central training centre to use certain procedures to minimise the risk of fraud. Managers at central office were well aware, however, that these procedures were not always used by trainees when they returned to their branches because their supervisors felt they were too time-consuming. The training programme itself addressed the issue of fraud, but constraints in the work organisation prevented the measures from being put into practice.

## 7.3 Helping transfer to take place

It is evidently beneficial to avoid such failure of transfer and to encourage the transfer of training back to the workplace. Solutions can be designed to be training based and/or work based.

### 7.3.1 Training based solutions

At the training design stage, training should be related back to the work situation wherever possible. Similarity between the training situation and the job should be maximised: interspersing training and work situations helps the continued implementation of new skills. On-the-job training with a one-to-one mentor ensures a direct transfer.

Training should be designed to give a wide range of experiences so that the principles can be applied to situations which do not exactly fit the training procedure.

Transfer is especially difficult when there is a significant time delay between the learning and its application: this links again to an appropriate identification. If the individual does not have need of the learning in the job then it cannot be a need. Training should not be given too long before the skills are actually needed, although the opposite case is perhaps also damaging: letting someone do a job for a while and then training them how to do it.

### 7.3.2 Work based solutions

In the workplace, goal setting is very important. At the end of the training event, trainees can be asked how they intend to use what has been learnt. These expected changes can be put into an Action Plan and a short period (six months or so) after the training they can be followed up to see if the plan was being put into effect.

It must be ensured that what has been learnt will be supported by managers and supervisors in the workplace.

One further thing that can only be done, and which links back to the training design, is to test the appropriateness of the information/knowledge learnt. When it was initially learnt there was no way for the individual to know whether it was useful or not: after a period this would become more clear. Vital information is available here which can be used as an input into training design. Topics to be covered are:

- Have you used the information (and if not, why not)?
- How useful is the knowledge for the job (and if not at all, why not)?

**Training as teams**

The company, a public house and restaurant chain, organises its staff into discrete teams within each pub/restaurant. All training (with the exception of initial induction training) is given as a team, where they all learn the same messages. The company believe that this helps transfer because:

- everyone is jointly aware of what they are trying to achieve with the new forms of behaviour
- all staff can jointly share in the new values
- commitment of all staff can be gained to the new ways of working.

When the training is transferred back to the workplace, the problems of negative behaviour does not exist: the supervisors (also part of the team) are not operating on a different system so no conflicts arise. The company believes that operating in this manner gives ownership and pride from being part of a team, which enables commitment to be gained from much lower down a team structure.

- Has there been any difficulty in applying the knowledge (and if yes, what was the difficulty)?
- How easy has it been to maintain the level of knowledge, given reference material, *etc.*

Knowledge does begin to fade over a period of time, especially if not re-visited. Re-visit with another post training knowledge test to see how much has been lost.

A positive step that many employers have started to use is a spot training meeting at which a suitable action plan, building on the new skills can be developed. This then forms part of the line manager appraisal system.

## 7.4 Summary

It is essential that the trainee, having learnt new knowledge and skills, transfers these back to the workplace. There are a number of reasons why such a transfer may not take place. It should be ensured that these are minimised, either by work-based or training-based solutions.

# 8. Evaluate the Effects of the Training on the Organisation

## 8.1 Introduction

One reason why assessing the value of training can be difficult is that it is hard to isolate training from other factors affecting the performance of a given section or work group once training has taken place. For example, if employees are taught to use new machinery, it may not be easy to decide whether improvements in performance are due to the equipment itself or the ability of employees to use it competently. Internal re-organisation and factors affecting the business environment may further complicate the issue. If only one or two employees undergo training within a large organisation, it could be very hard to measure their improved input. In fact, unless the firm is able to assimilate the new skills of its employees the training may be largely wasted.

Theoretically, this is perhaps one of the most difficult areas to undertake in the process of measuring the effectiveness of training. Hopefully, if the preceding steps have been undertaken in sufficient detail then it should become easier. However, it still needs a consideration of the level of the evaluation (at the individual level or the organisational level) and the research tools which employers can use to aid them in this process. In this chapter, we first of all discuss the level at which the evaluation takes place and then the tools that can be used to isolate and identify any impact.

## 8.2 Individual or organisational level?

There is often confusion over whether the impact of training should be measured at an individual or organisational level. Most training and development activities focus on individuals, with the intention that the learning process will enable them to do their job in a more effective way. However, the objective of an investment in training and development is to increase effectiveness of parts of the organisation, and ultimately improve the performance of the whole of the organisation.

Sometimes organisations rest on the assumption that if the individuals within a team have become individually more effective then it is a fair assumption that the whole will have become more effective as well. Not only is this a false

assumption, but it also fails to deliver the key message that is required: namely that the impact on the organisation of *x* amount of training has been *y*.

This different level of emphasis implies two different emphases of the process. Changes in the behaviour of individuals can be monitored using individual appraisal, before-and-after measurement and other means of personalised management. The research tools for doing this are described below and can be applied.

Although the situation is more complex, the process to measure change within an organisation is effectively the same as for individuals: identify the areas that are expected to change and measure them before and after the training action has taken place. However, this raises the issue of what organisational effectiveness actually is. Various types of measure have been classified by Cameron (1980) as being:

- Output-directed, focusing on the outputs of the organisation.
- Resource-acquiring, judging effectiveness by the success of the organisation in acquiring needed resources from the external environment.
- Constituency-satisfying, where effectiveness is judged on the organisation's ability to respond to the needs of its various constituency groups.
- Internal process-directed, with attention focusing within the company and how it operates.

The use of all these types of measure may not be necessary in each organisation, and a smaller selection may suffice. The example shown in the text box below describes the factors that were considered by an organisation that was considering entering the Investors in People process.

## 8.3 Research tools

These approaches on their own do not answer the criticism that changes would have happened in any case, regardless of the impact of the training event. In order to be able to take account of these we need to use different evaluation methodologies.

To measure the net impact of the training programme a comparison must be made between what has happened following the programme, with what would have happened in the absence of the training. There are several different techniques which can be used to do this and below we discuss the use of:

- control groups
- matching groups

**Evaluating the impact of Investors in People**

To become involved in Investors in People requires a commitment of time and effort by the company. If the company is willing to do this, then it may be prudent before setting off down this route to consider how to assess the impact that achieving the Standard will actually have upon their company.

**Measuring the impact**

The employer decided to measure the impact of Investors in terms of ***outcome*** and ***process*** measures, where:

- ***Outcome measures*** measured business outcomes. For this company engaged in the service sector it was decided that the main measures would be customer satisfaction and profitability levels (both as a percentage of turnover and per employee).
- ***Process measures*** examined factors which it was thought that Investors would directly impact upon: staff motivation, staff performance and the training system.

  1. *Staff motivation* was measured in a number of ways. Indicators of staff morale were created by using turnover rates (excluding enforced turnover such as redundancies) or sickness/absenteeism rates. The company was fortunate in having recently conducted a staff attitude survey which was perhaps the most rigorous measure available.

  2. *Staff performance* was measured by using the outputs from the appraisal systems, again fortunately one using standardised forms, producing data which could be used to create an index of performance. The company was aware that the quality of this data was only as good as the performance appraisal system which underpins it, but this is a separate issue beyond the evaluation of the impact of Investors.

  3. The company undertook an audit of the *training system*, enabling them to take an objective view of what the company actually did in terms of training and development. This covered the approach to managing training (existence of a formal training budget, size, whether it is all spent, what it covered, how it is decided and by whom) the planning of training (method of training needs analysis, if any, and existence of individual or collective training plan), steps to measure the effectiveness of training and the delivery of training.

**First steps**

The company drafted a position paper on where they were are at the outset: in essence, a baseline position paper. They recognised that if they did not do this at the time, then a retrospective attempt at a later date would lead to some of the information not being available. Whilst initially sounding like a bureaucratic process it was not unduly so: most of the factors involved were considered when the company made its decision to become involved in the first place. In addition, much of the information required was readily available, including information gathered for use in drawing up the Action Plan. Little additional information was required and none specifically collected: as always, there was a trade-off between the usefulness of the data and the cost of actually getting it.

It was intended that when the standard is reached, this baseline should be revisited and the data collected again. This enables a before and after comparison, which will indicate which areas have improved over the period. Given that early evidence suggests that gains from Investors are achieved gradually, revisiting a third time when the standard has been maintained for a year may be necessary.

- before-and-after studies
- statistical techniques
- hypothetical questioning.

### 8.3.1 Control groups

The use of control groups is the classic design for evaluation. Whilst it is not always possible to achieve, it does provide the clearest method of measuring the value added by training.

A control group can either be an individual, sets of individuals, organisations or parts of an organisation. The key element of this group is that they are chosen and then do not receive training, so that their behaviour remains constant. The performance of other groups who *have* been trained can then be compared with the performance of the original control group. The measurement process is shown in the table below: the impact of the training event is the difference between b minus a, and d minus c. That is, both target and control group will have changed over time: the difference between these different rates of progress is the impact of the training.

| | Before | After |
|---|---|---|
| Target group | a | b |
| Control group | c | d |

A crucial factor is deciding who should form the control group. In the purest form of experimental design, individuals or groups are assigned to control groups on a random basis. If this is not possible, control groups should be chosen so that their characteristics are similar to those of the target population.

There are problems with this form of research design, namely:

- There may be no 'extra' people available to serve as a control group since the training may be designed to serve everybody. In this case, excluding some people from the training (whilst it may be possible) creates additional problems in that senior executives may object to individuals not receiving the training and thus lowering their productive capacity.
- Control groups must be defined before the start of the action; this research design cannot be applied retrospectively.

### 8.3.2 Matching groups

Matching groups are available individuals or groups with similar characteristics who have not received the benefits of the training which can be used as comparators.

**Wine service training in Forte Hotels**

In 1990, Forte Hotels decided to launch a major programme to improve the wine service and selling skills of their staff. In response to this, The Professional Wine Service programme – an integrated video, learning guide, workbook and standards manual – was developed as a single open and flexible learning package to develop trainees' competence.

In order to evaluate the effects of this initiative, the training was introduced to 34 company hotels and 13 similar but independent hotels. The results from these were then compared with those of a control group comprising 13 separately selected but similar hotels from within the company chain, where no new wine service training was provided.

The results of the training programme were analysed over a 12 month period to gauge reactions to training, practical applications of new skills, motivational changes in trainees and overall business **behaviour. The results showed significant business benefits** in that the hotels with the training out-performed those in the control group. While the control group experienced a **decrease** of five per cent in monthly liquor sales during the training period, the company hotels and the independent hotels who used the training scheme **increased** their sales by seven per cent.

Using this comparative approach, Forte Hotels were able to demonstrate a range of advantages deriving from the training programme. These included:

- increased product sales
- higher customer satisfaction
- improved staff motivation, and
- raised,professional standards.

The existence of a control group gives a much clearer view of the benefits of training to the organisation.

Taken from *Target Training*, Employment Department.

The major difference between these and control groups is the method of selecting the respective groups. Whilst a control group is selected *ex ante*, matching groups are chosen *ex post*. They are, therefore, not theoretically as rigorous as control groups, but are possibly the most common choice in practice.

In using matching groups it is important to realise that the aim is to take account only of those factors which could be significant: it is not possible or essential to guard against every source of error.

### 8.3.3 Before-and-after studies

A before-and-after study involves observing the behaviour or characteristics of groups benefiting from training, both before and after the event, and then examining changes in the variables that the training was supposed to affect. Before-and-after studies are frequently used in conjunction with control groups or matching groups, although they have been used without such external comparators.

Normal practice is to establish a baseline study, which is an examination of the situation before, or at the outset of the training. In a few limited cases it may be possible to rely on historical data to produce a retrospective base line.

The main problem with before-and-after studies (when they are used on their own) lies in eliminating extraneous economic effects: that is, identifying what would have happened anyway.

### 8.3.4 Hypothetical questioning

Hypothetical questioning involves asking recipients of the training what their actions would have been in the absence of the training. A comparison between this hypothetical behaviour and their actual behaviour will therefore show the effect of the training.

When using this method, the questions need to be carefully phrased and the answers interpreted with caution in order to avoid contaminated results. Trainees may want to be seen to give the 'right' answer and not to appear to have wasted time and money on the training. This approach also assumes that the trainee actually knows what would have happened in the absence of the training.

A variant on asking the trainee is to ask the supervisor or manager of the trainee to ascertain their views on performance pre- and post-training. This situation suffers from the same problems as those discussed above, but works well in conjunction with a rigorous appraisal system.

## 8.4 Which methodology?

Which research tool is used will usually be driven by practical considerations such as the stage of the training's development and the quality of data available. It will usually be the case that a mix of research tools may be most appropriate.

If the evaluation is designed (as it should be) before the training starts, then a baseline study can be completed and control or matching groups selected.

A point to bear in mind here is whether the timing is appropriate. There may well be cases where evaluation is not going to produce a realistic result. Examples are where the training activity is too recent or too distant to allow a proper evaluation, or where there have been one-off events which may distort the external environment, for example a company merger.

Evaluation can be an expensive process but should always be seen in the context of the total spend on the overall training programme. If, however, the cost of evaluation is a

disproportionate amount, then an alternative method should be considered. What is a 'reasonable' amount varies, but the most expensive types (usually of individuals, which require specially designed surveys) involve spending about one per cent of the total spent on the training. It should be borne in mind that the amount spent on evaluation will vary according to the life cycle of a particular course of training; more will be spent at critical times, such as during a pilot programme or during changes to the training, and less when the training is up and running. Overall, however, evaluation costs should be seen as a legitimate part of training expenditure. If the costs are separated out into a separate budget, then the evaluation process will suffer. This will nearly always be a false economy.

## 8.5 Summary

Because of the increasing use of, and emphasis on individual appraisal, as a management tool and to determine individual training needs, the majority of evaluations of the impact of training tend to be completed at the level of the individual. Whilst useful, most organisations will also want to know the impact on the organisation.

To do this effectively, requires an evaluation framework which has to be designed in advance. Most frequently used in combinations, these can be used at either the individual or organisational level.

# 9. Ensure that the Advantages of Training are Maintained in the Long Term

## 9.1 Introduction

If the training has been a success and both individuals and organisations benefited, then it would seem only sensible to take action to ensure that any positive results are kept within the organisation for as long as possible. In particular, it is important to ensure that the benefits of training are maintained in the long term, since it is quite possible for employees to improve their performance immediately after training and then gradually revert to their previous ways of working. The obverse of this is also true: training may have negative results (usually where there are clashes of organisational culture and where a new 'learnt' technique is not appropriate to the host organisation). In these cases training needs to be *un*learnt.

There are two areas we move on to discuss below, where the research has found examples of this use of reinforcement: (i) the use of formal reward system to ensure that there are positive incentives for employees to use their new skills and (ii) constant reassessment.

## 9.2 Use of a formal reward system

Skill-based, or competence-based, pay, is a payment system in which pay is linked directly to the acquisition by employees of new skills (usually in addition to a general pay rise). It has been recognised by a number of employers as a means to raise the skills base of a target group. It is therefore a suitable system to reward the acquisition and use of skills acquired through training, thereby supporting the maintenance of positive behaviour in the workplace.

The use of pay to reward improved performance is a topical issue. Thomson (1993) notes evidence that suggests that between a half to two-thirds of UK organisations may have some form of individual-based performance related payment (PRP) and that this form of payment system is now covering a wide range of employees. Despite its increasing popularity, some doubt has been cast on the effectiveness of such systems in meeting their objectives.

Computer firm Unisys has joined the growing number of organisations using competences to link performance to reward. An all merit competency-based pay scheme covers all 1,400 staff, specialists and managers as part of a long-term employee development programme aiming to improve the skills and behaviours of employees.

Unisys defines competences as 'the ability to perform a job-related task to a pre-determined standard', and every employee is assessed against ten competences. Five of these are core competences, which Unisys wishes to encourage across all the organisation, and the remaining five are specific to each of the four separate function groups.

The five core competences are:

- **team orientation**: working willingly and effectively with others to accomplish goals and to identify and resolve problems which may be of no direct personal interest.
- **innovation/creativity**: generating creative and effective solutions to business problems and situations. Demonstrating a willingness to try new and different approaches.
- **ownership/accountability**: taking responsibility for actions and accepting associated risks.
- **quality and customer service orientation**: working in partnership with customers (both internal and external) to achieve results which are mutually beneficial
- **drive for results/initiative**: actively influencing events rather than passively accepting; seeing opportunities and acting upon them; originating action.

All competences are rated on a scale of one to five, with the lowest rating of one indicating a major development need. Five marks the competency as a major strength.

Annual salary increases are determined by a matrix linking competency scores to a position on the range. One aim of the new system is to differentiate sharply between performers.

Taken from *IDS Management Pay Review*, July 1994.

However, the use of such flexible systems gives obvious scope for rewarding individuals who are perceived to perform better than others, and thus may have a role in maintaining improvements in performance following training or development.

Some organisations have gone further than this and use competences to link performance to reward. A case in point was reported in the IDS Management Pay Review (1994), citing the example of Unisys (see box).

## 9.3 Reassessment of performance

One method of maintaining behaviour is to constantly re-assess performance to ensure that the enhanced behaviour is maintained. This can only be done by a line manager who is in constant contact with staff, who works with them to ensure that

The company, a chain of fast food restaurants, has a well-developed competence framework for all the tasks that need to be accomplished within its establishments. Each member of staff is checked on these competences and on gaining them is awarded a 'merit'. The hourly rate for the job is directly linked to the number of merits that an individual holds.

To maintain standards line managers have, as part of their job roles, the responsibility to constantly assess the performance of individuals against the competence criteria. If an individual is noted as not performing as the competence framework lays down, the merit is withdrawn, with the hourly rate of pay being subsequently reduced.

they are behaving as intended. This method is particularly effective when linked with a reward system, as noted above.

## 9.4 Summary

Left to their own devices, individuals may slide back into old systems of working, particularly when this retrograde behaviour is tacitly supported by supervisors, colleagues or the working environment. To avoid this requires a combination of positive rewards and assessment.

# 10. Presenting the Results

## 10.1 Introduction

The key issue remains the extent to which we can trace these elements down to a cost base — *ie* identify the costs and benefits of training in such a way as to allow a financial analysis.

This is, of course, where the greatest difficulty lies. In the first instance, the majority of companies do not even fully cost their expenditure on training, never mind the benefits that such an investment reaps. Below, we outline some of the issues that need to be considered.

## 10.2 Costing training

When estimating the elements that could be included in their training, employers face a lengthy list. There is a huge variation between employers in what items of expenditure they actually include on this list in doing their own calculations. Thus was explored by Dench (1993) who found that:

- a relatively large proportion of employers were unable to provide any estimate of training spend at all, and
- there was no general agreement among employers as to what constitutes training expenditure.

Because of this, we do not feel able to prescribe what should be included in a costing of training expenditure, but will limit ourselves to listing factors which might be included. The choice of which of these to choose lies between the HR professional and their accountants within each organisation. How this (and particularly fixed cost or overhead items) is then further allocated to individual training events, is a further area for consideration. A suitable list is given by Newby (1992) and we show this below.

## 10.3 Estimating the benefits

Conventional accounting techniques are unsuitable for providing the necessary financial information about human resource issues, including training.

**Items that may be included in a costing of training**

**Fixed capital**

- building and training rooms
- fixtures and fittings
- fixed services (eg aerial sockets, CCTV, etc.)
- equipment
- provision of a training resource (eg library)
- motor vehicles.

**Working capital**

- consumable supplies
- maintenance of equipment and premises
- materials used during training

**Administrative and personnel costs of the training function**

- employment costs for training manager, administrative and clerical staff
- apportioned costs of rent, business rate, heating, lighting, etc. for training rooms
- salaries (gross) of instructors/trainers when not training or engaged in development work.

**Costs of providing instructors/trainers**

- fees for external 'trainers of trainers' courses
- recruitment and selection costs
- refresher and developmental courses
- salaries (gross) of instructors/trainers when not training or engaged in development work.

**Costs of training development**

- fees to external consultants
- expenses incurred in producing visual aids, printing of course materials, etc.

**Cost of giving instruction**

- travel and accommodation
- salaries (gross) of instructors/trainers when not training or engaged in development work.

Taken from Newby, 1992.

Carnevale and Shulz argue that the traditional balance sheet shows an organisation's human resources solely as expenses, whereas they should be seen as assets to be optimised. The balance sheet also tends to give a short term view and both these factors discourage investment in training. The use of cost benefit analysis is also inappropriate for training activities because

**Deriving financial benefits**

Coaley (1994) outlines a procedure for deriving the financial benefits of training. The steps are as follows:

- Costing poor performance: individuals with a skill deficiency make mistakes, which can then be accounted for in financial terms. Areas of poor performance included customer complaints being inadequately dealt with, incorrect level of details on projects, missed deadlines, etc. For each situation line managers were asked for details of direct costs in terms of cash paid out to rectify the situation, lost orders for the company and time wasted. Salary levels were recorded in order to derive financial costs of wasted time.
- Measuring increase in skills: before the training event, individuals were assessed by line managers on a scale of zero (low) to ten, where it was agreed that a rating of six indicates acceptable, satisfactory performance. Assessment is made post and pre-testing.
- Areas where individuals had progressed from below six to six or above meant that tasks which were being done less than satisfactorily before were now being satisfactorily, and that costs previously incurred are now saved.

**By using this method and comparing it with the costs of the training within a large UK organisation, it was estimated that training had raised performance to a level which represents a theoretical financial contribution to the organisation of £71 million, whilst the costs of that training amounted to £7 million.**

Taken from *Management Training: Cost or Investment?* Coaley (1994).

whilst the costs are immediate and apparent, the advantages may take some time to be realised.

However, inevitably interest will form around putting a monetary value on the results of training. An exercise has recently put forward a way for this to be done, which is explained in the text box above.

## 10.4. Presenting the results

To be ultimately useful, the results of the evaluation exercise need to be fed back to those involved in either policy making or developing the training programmes: without these feedback loops the 'cycle' is not complete. It is quite possible that the results of your work will not be appreciated and that elements within the organisation may resist changes. Simple awareness of this will always help, but further things to be considered are:

- Present appropriate information to appropriate users. As noted above, there are different interest groups who will want different things from the evaluation. Make sure that the right groups are given the right information.
- Present useful comparisons, providing examples of good and bad training outcomes, together with some indicators of what produces good and bad outcomes.

**Using evaluation data**

Reporting on a case study of a major training programme associated with one of the biggest non-military computerisation projects in Europe for the Department of Social Security, Easterby and Mackness examined what had happened to the evaluation data and how it had been used. It was found that there were different groups who examined the data for different things, such that:

- regional managers received the reports first, skimmed down them, checked how their regions were doing against others and passed the reports down the line. On the few occasions that the evaluation reports initiated change, this was sparked off not by the evaluation reports, but by comments from tutors and participants.
- trainers had limited interest in the statistics (although some were interested in how they compared against other regions). Significant changes to their operations were picked up from questionnaires completed at the end of the training events.
- the design team had little time for the reports or the ratings from the questionnaires. For them, the most useful information came from the follow-up interviews and the tutor reports.

Taken from Easterby-Smith and Mackness, 1992.

- Communicate the findings in a non-technical language. The process of measuring the effectiveness of training may be a technical process, reporting the findings need not be so.
- Present the findings at an appropriate time, usually when decisions about the training programmes are being made, rather than a long time before or afterwards.
- Be honest about the limitations of the evaluation exercise. Arguing a case on dubious data damages credibility of all who have taken part.

The point of appropriate information for appropriate users is one highlighted by Easterby-Smith and Mackness, shown in the box above.

## 10.5 Summary

Inevitably, some focus will be placed on the financial aspects of the evaluation procedure: has the training been worthwhile, does it show a return to the company? There are no hard and fast rules about a way to do this. In this sense, evaluation is as much as art as a science. However, the same could be said about accountancy: it was not for nothing the term 'creative accountancy' was coined.

Different employers include different elements when they total the costs of training. One approach is as valid as another, but whichever items are included, it must be made clear what is in (and what is not) and a reason behind these decisions.

An estimation of benefits can only be made if an estimate of the shortfall has been made at the identification of need stage. If this is the case, then repeating the estimation process should give an indication of the value of the investment.

Finally, consideration must be given to the way in which the results of the evaluation are fed back. As we have seen in earlier chapters, there exists different kinds of information available: there are also different stakeholders, operating within their own time frames.

# 11. Conclusions and Summary

The training evaluation literature incorporates a wide variety of approaches, which range from highly theoretical models to practical manuals and texts. While the adoption of a well thought out model can avoid money being wasted in training, it is clear that time, resources and money for evaluation are limited. In addition, it is clear that there remain a good many obstacles facing an evaluation of training. The Industrial Society notes that over a half of organisations mention that the difficulty lies in establishing measurable results, which indicates a lack of knowledge of the appropriate techniques. Half mention a lack of time, with a third noting a lack of line manager support.

In practice, therefore, evaluation techniques need to be clearly thought out but also manageable in their levels of complexity and sophistication. The gap between theory and practice needs to be narrowed and this review has attempted to highlight some basic issues in the debate.

For those involved in the practice of delivering training and interested in evaluating the outcomes of their activities, the pertinent point is more than likely to be 'where do I start?'. The answer to this is that they must start at the most obvious place: at the beginning, which, in this case, is the identification of training needs. This has to be the starting point, for without it the rest of the stages of the training cycle are based on poor foundations. It must be ensured, however, that it does not also become the final stage. A training department, which promises to deliver an indicator of value for money of its activities and only gets as far as identifying needs (which undoubtedly will be seen as a ploy to attract more resource and investment) will not enhance its reputation throughout the organisation.

It is likely that the training manager will not be able to evaluate all the training that takes place within the organisation according to the systems described in this report. There is a need for prioritisation: which happens most frequently, which is most costly, but perhaps most importantly, which training and development is most important for the organisation. Determining priorities will allow some evaluation to take place whilst other will stay undone. However, it will provide the training manager with the most important of tools, clarity. It will allow the training manager to be clear about why they are doing things and not others.

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**MEASURING THE EFFECTIVENESS OF TRAINING**

**M Spilsbury**

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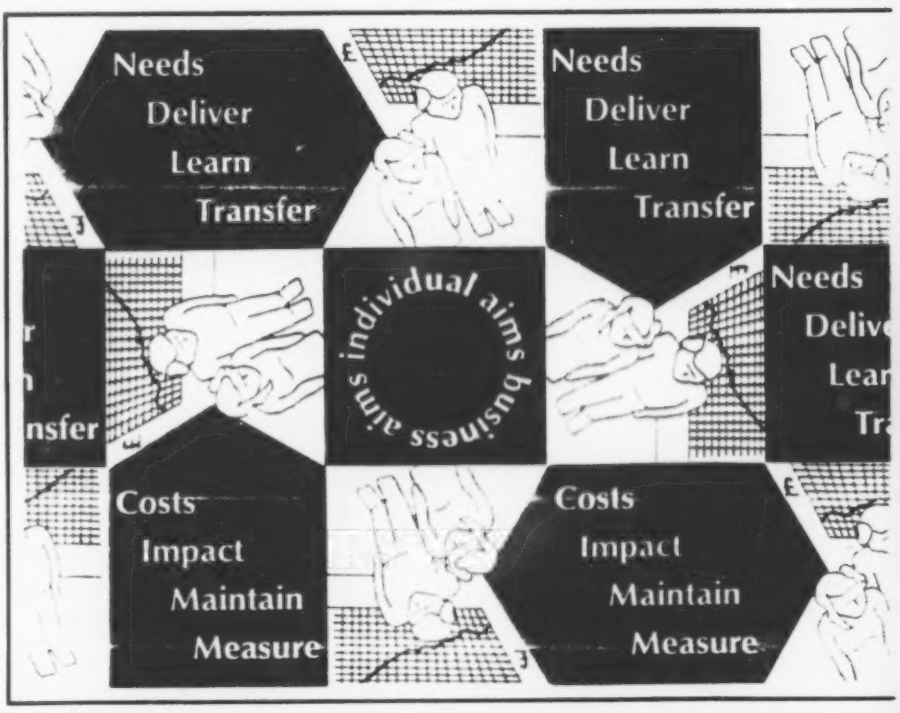
This report is a synthesis of the literature on training evaluation, combined with evidence from a number of employers who are actually undertaking some evaluation activities. It describes a cyclical model to evaluate training, with particular emphasis laid on the identification of training need and research tools that can be used to measure the impact of training on the organisation.

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